

## The Labor of Disruption

This is the print version of a talk I gave at the Cultural Studies Association annual conference this year in Salt Lake City. I had intended to publish it this week but given the recent publication of [Jill Lepore's piece on disruption for the New Yorker](#) I thought I should probably expedite the process and ditch my planned rewrites. To be perfectly honest, I've only skimmed Lepore's argument and haven't read through any of the responses yet either, but plan on doing so today and tomorrow and will have some thoughts up here then.

The presentation was accompanied by a firmly tongue in cheek Prezi that can be found [here](#). What follows is my attempt to moved towards a critique of disruption theory that is centered around the question: Where is "labor" in disruption? Thanks for reading:

First used in an article by Clayton Christensen and Joseph L. Bower in the January/February 1995 issue of Harvard Business Review, the term "disruptive technology" and it's more commonly used (and arguably bastardized) versions "disruption" and "disrupt" have become the dominant buzzwords in not only the Silicon Valley tech sector but contemporary American capitalism writ large. For those of us in academia, the term is probably most familiar from the last few years of the explosion (and seemingly hopeful implosion) of MOOCs, sold to administrators and the general public as disrupting the bureaucracy and elitism of the Ivory Tower and bringing education to the masses. But increasingly you see the term attached to anything that has to do with "the digital" or Silicon Valley. The purpose of this presentation is to greater understand what it is that we talk about when we talk about "disruption." By returning to Christensen and his various co-authors' earlier texts, teasing out their metrics for what is and what is not "disruptive," and locating the shift in the active subject of the term from the established firm to the individual, I'm attempting to situate disruption the buzzword in it's own history and within the capitalist milieu it has come to dominate.

Christensen and Bower's original 1995 article "Disruptive Technologies: Catching the Wave," Christensen's book *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail* originally published in 1997, and pieces like Christensen and Michael Overdorf's 2000 Harvard Business Review article "Meeting the Challenge of Disruptive Change" are works that are directed primarily to a corporate management audience and are intended as advice for managers as to how to stay ahead of the curve when it comes to changes in the technologies their firms produce. The disruptive technology, and hence the process of disruption, is generally defined as a product that initially offers less performance and features than an established technology and appeals to an emerging market that in it's first instance is not valuable enough to warrant the interest of what the literature refers to as "incumbents." Christensen argues that what established firms are best at is creating what he calls "sustaining" technologies, or technologies that "foster improved product performance" Disruptive technologies on the other hand are "innovations that result in worse product performance, at least in the near-term." Christensen further says "generally disruptive technologies have other features a few fringe (and generally new) customers value. Products based on disruptive technologies are typically cheaper, simpler, smaller, and frequently more convenient to use." The development of the disruptive technology eventually catches up with the sustaining technologies it is disrupting and

in logic of endlessly progressing capitalism, the disruptive pattern begins anew, pictured as a never ending “Technology S-curve.”

The archetypal example that Christensen uses in both the original article and in the *Innovator's Dilemma* is the disk drive industry from the late 1970s into the mid-90s. Christensen argues that the disruptive innovations of the 5.25” and 3.5” drives changed the industry because both sizes were drastically less powerful, popular, and profitable when first introduced. The market for drives in the earlier period of his timeframe was primarily in mainframe computing which required much greater computing power than the 5.25” drive could provide. The emerging market for desktop computing was largely ignored by major drive makers because the profit margins weren't big enough for larger firms to pay attention to. The same went for the 3.5” drives that served the portable computer market that developed in the late 80s. In the process, many firms who didn't see the disruption coming failed and several new “entrants” became successful. Both the original article and the *Innovators Dilemma* cite the disruption of the 3.5” drive's development by former Seagate (an incumbent) employee Finis Connor and his entrant company Connor Peripherals. In the account, Connor left Seagate disgruntled after having his work with the 3.5” drive not given enough institutional support. His disruptive innovation and disruptive company stole the marketshare of Seagate in the emerging market, which soon came to dominate the scene.

However, if we take this archetypal trajectory and indeed much of the empirical evidence in *The Innovators Dilemma* and stretch it past the rather short temporal frame that he places it in, it actually displays a marked tendency for disruptive technologies to accomplish a concentration of capital at the top of a hierarchical structure through the process of cannibalization of mid-level firms that are susceptible to rapid changes in the architecture of production. The largest firms are not nearly as susceptible to disruptive technologies. This is a cannibalization up the food chain. In a footnote of *The Innovators Dilemma*, Christensen admits that vertically integrated corporations are not actually affected by disruptive technologies. He points out that IBM was never truly effected by the consecutive disruptions of the 5.25 and 3.5 inch drives that changed the face of personal computing. In addition, vertical integration aside, the Connor Peripherals and Seagate story ends in the eventual buyout of Connor Peripherals by Seagate for \$1.1 billion.

Some of this process is just the exigencies of industrial production, to be sure. Changes in the manufacturing process are exceptionally costly so firms who have either been able to outsource production entirely and act only as assemblers of units are much more likely to survive. Speaking of the gains that could be made in the portable computer market Christensen remarks: “Competing in the portable computer value network, however, entails a very different cost structure. These computer makers incur little expense in researching component technologies, preferring to build their machines with proven component technologies procured from vendors. Manufacturing involves assembling millions of standard products in low-labor-cost regions.”

This is only the second explicit reference to labor in the entire book and it comes almost as an aside deep into chapter 2. The implications are clear, though. Low cost labor and the elimination of traditionally costly employees like a direct sales force lowers the profit margin threshold,

which in turn allows for a greater degree of flexibility towards innovation. When less is invested in things like sales and production, research and development can get the lion share of the resources. The point made is essentially the difference between the fixed capital/dead labor heavy of Fordist industrial production versus flexible, just-in-time Post-Fordist production. And so my argument is in part that all “disruption” meant in its initial instance was “Post-Fordism.”

However, Christensen did not stop writing and the forces of capitalism were not bound to just-in-time production. Christensen, obviously seeing that theories about industrial production were more than likely going to be disrupted (nudge nudge wink wink) by the early 2000s started to bring his theories to culture, education and service industries. His most recent work has argued for the need/inevitability of disruption in the health care industry (2008’s *The Innovator’s Prescription: A Disruptive Solution for Health Care*), higher education (the aforementioned 2008 book *Disrupting Class* and the more recent *The Innovative University: Changing the DNA of Higher Education from Inside Out*), and more general works about innovation that target the Silicon Valley world that has taken up his cause most fervently. He also has a number of acolytes, not the least of which is Eric Reis, author of the Lean Startup, a book and “movement” that defines “start-up” as an organization dedicated to creating something new under conditions of extreme uncertainty.

As “disruption theory” has been taken into industries that are based not in the production of material objects but in services, the issue of labor in the theory becomes much clearer. What is disrupted and what is innovated is a way to reduce labor costs. That might be through circumventing costly regulations and a unionized workforce, (think of Uber here), drastically reducing the amount of laboring bodies (think MOOCs), or through soliciting unpaid labor through appeals to community (think crowdsourcing like Wikipedia). The disruptive technology is that which reduces the cost of labor (labor that offers “less performance” and “less features”). And the easiest way to reduce the cost of labor, is to either a) create a technology or business structure that allows for a capture of labor previously done for free/cheaper b) create technology that enables the dissemination of information normally done by many to be done by one or c) to see yourself and your ideas as the disruption, become the disruptor yourself.

This option of being the individual disruptor (the title of a recent Christensen book is *How Will You Measure Your Life*) represents a shift from a focus on the technology itself, to the actor who produces that technology or simply the idea of that action. Christensen’s definition of technology that he gives in his early writings is instructive here: “the process by which an organization transforms labor, capital, materials, and information into products and services of greater value.” That organization is you, and your process is explicitly the ideology of contemporary capitalism. In the transition from “post-fordism” to whatever we call contemporary capitalism, disruption theory’s main points persist. Christensen’s “resources-processes-values-culture” framework in which the most flexible and innovative of these elements is the resources is particularly salient. Christensen sees an increasing inflexibility as one progresses from the processes of work towards a value structure that determines the prioritization of how resources are allocated. Processes become routinized, finally ending in those values being codified as they become a part of a firm’s culture. In a word, bureaucracy. The individual disruptor is the sworn enemy of “bureaucracy” and is sworn to attack. Instead of “catching the wave” we are implored to be the wave itself. Disruption is the dream of the

arbitrage of the size of the waves, the bends in the s-curve. The infinite and instant profitability of your heroic ideas.